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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,275	03/12/2004	Steve L. Somers	74200.936	1322
22804	7590	12/14/2004	EXAMINER	
THE HECKER LAW GROUP 1925 CENTURY PARK EAST SUITE 2300 LOS ANGELES, CA 90067			MAYO III, WILLIAM H	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/800,275

Applicant(s)

SOMERS ET AL.

Examiner

William H. Mayo III

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152).
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to because Figures 1a & 2 lack the proper cross-hatching which indicates the type of materials, which may be in an invention. Specifically, the cross hatching to indicate the insulation and conductor materials is improper. The applicant should refer to MPEP Section 608.02 for the proper cross-hatching of materials. Correction is required.

Specification

2. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

3. The abstract of the disclosure is objected to because in lines 1-5, the abstract refers to purported merits or speculative applications of the invention, which is improper content for the abstract. The applicant should delete the sentences in order to provide the abstract with proper content. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-6, 8-9, and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenny (Pat Num 5,298,680) in view of Rutledge (Pat Num 6,323,427). Kenny discloses cable (Figs 3-4) utilizing twisted pair technology for the

Art Unit: 2831

transmission of balanced or unbalanced signals (Col 1, lines 5-8). Specifically, with respect to claim 1, Kenny discloses a cable (30) comprising a plurality of first twisted pairs (16 & 18) of conductors (12) that may have a first lay direction (counter clockwise, Col 2, lines 35-37) states that pair 16 is twisted counter clock wise and pair 18 can have the same twist direction) and a first lay length (Fig 3), wherein the first plurality of twisted pairs (16 & 18) are twisted together as a bundle (32), and a second pair of conductors (22) having a second lay direction (clockwise, Fig 3) and a second lay length (Fig 3), wherein the second lay direction (clockwise) is opposite to the first lay direction (counter clockwise) and wherein an outer sleeve (17) encompasses the bundle (32) and the second twisted pair (22) that lays in parallel with the bundle (32, Fig 3). With respect to claim 3, Kenny discloses that the first lay direction may be clockwise (i.e. pair 18 may be twisted in the clockwise direction and therefore pair 16 may be twisted in the clockwise direction since both may be twisted in the same direction, Col 2, lines 31-38). With respect to claim 4, Kenny discloses that the first lay direction is counter clockwise and the second lay direction is clockwise (Fig 3). With respect to claim 5, Kenny discloses that the bundle (32) is twisted in the first layer direction (counterclockwise, Col 2, lines 34-35). With respect to claim 6, Kenny discloses that the plurality of first twisted pairs (16 & 18) is of substantially equivalent electrical length (i.e. they has the same twist length from the front of the cable to the back of the cable and therefore the same length). With respect to claim 8, Kenny discloses that the cable (30) further comprises a third twisted pair (20) lay in parallel to the bundle (32) and is also encompassed by the jacket (17, Fig 3). With respect claim 14, Kenny discloses a method for making a cable

Art Unit: 2831

(30) comprising twisting a plurality of twisted pairs (16 & 18) into a bundle (32), wherein the twisted pairs (16 & 18) may have a common lay direction (counter clockwise, Col 2, lines 35-37) and a common lay length (Fig 3), laying an additional twisted pair (20 & 22) in parallel with the bundle (32), wherein the additional twisted pairs (20 & 22) form a bundle (34), which has a lay direction (clockwise) opposite the common lay direction (counter clockwise) and encompassing the bundle (32) and the additional twisted pair (22) in an outer jacket (17). With respect to claim 15, Kenny discloses the encompassing step comprises pulling the bundle (32) and the additional twisted pair (22) in parallel (Col 1, lines 61-64). With respect to claim 16, Kenny discloses that the twisting step is performed in a common lay direction (counter clockwise, Col 2, lines 32-38). With respect to claim 18, Kenny discloses that the plurality of conductors comprises three (i.e. the bundles 32, 34, & 36). With respect to claim 19, Kenny discloses that the common lay direction may be clockwise (i.e. pair 18 may be twisted in the clockwise direction and therefore pair 16 may be twisted in the clockwise direction since both may be twisted in the same direction, Col 2, lines 31-38). With respect to claim 20, Kenny discloses that the twisting step is performed in a common lay direction (counter clockwise, Col 2, lines 32-38).

However, Kenny doesn't necessarily disclose second lay length being different than the first layer length (claim 1), nor the second lay being longer than the first lay length (claim 2), nor the jacket being extruded (claim 15), nor the additional twisted pair having a lay length that is longer than the common lay length (claim 17).

Ruthledge teaches a multi-pair cable (Figs 1-4) that has such a twisted pair arrangement resulting in reduced amounts of delay skew wherein capacitance levels between dissimilar twisted pairs are optimally matched (Col 6, lines 41-49). Specifically, with respect to claim 1, Ruthledge teaches a cable (10) comprising a first pair of twisted conductors (bottom 16) having a first lay length (shorter twist of paired conductors) and a second pair of twisted conductors (top 16) having a second lay length (longer twist of paired conductors), wherein the second lay length is different than the first lay length (Fig 1). With respect to claims 2 & 17, Ruthledge teaches that the second lay length (longer twist of paired conductor) is longer than the first lay length (shorter twist of paired conductors, Fig 1). With respect to claim 15, Ruthledge teaches that the cable (10) comprises a first twisted pair of conductors (bottom 16) and a second twisted pair of conductors (top 16), wherein a jacket (12) surrounds the first and second twisted pairs of conductors (top and bottom 16), and wherein the jacket (12) may be made by extrusion (i.e. feeding through an extruder, Col 4, lines 10-12).

With respect to claims 1-2, 15, and 17, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the cable of Kenny to comprise the second pair of conductors to have a different lay length configuration and jacket configuration as taught by Ruthledge because Ruthledge teaches that such an arrangement results in reduced amounts of delay skew wherein capacitance levels between dissimilar twisted pairs are optimally matched (Col 6, lines 41-49).

Kenny also doesn't teach the cable having a tear shape cross section (claim 9).

With respect to claim 9, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the cable cross section to comprise a tear shape, since it has been held that a change in form cannot sustain patentability where involved is only extended application of obvious attributes from a prior art. *In re Span-Deck Inc. vs. Fab-Con Inc.* (CA 8, 1982) 215 USPQ 835.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kenny (Pat Num 5,298,680) in view of Rutledge (Pat Num 6,323,427, herein referred to as modified Kenny), as applied to claims 1 & 6 above, and further in view of Biegon et al (Pat Num 4,767,891, herein referred to as Biegon). Modified Kenny discloses cable (Figs 3-4) utilizing twisted pair technology for the transmission of balanced or unbalanced signals (Col 1, lines 5-8).

However, modified Kenny doesn't specifically disclose the outer jacket comprising markings for cutting locations associated with minimum skew (claim 7).

Biegon teaches a cable (Figs 1-7) comprising multiple twisted pairs (26) being surrounded by a jacket (72), wherein the outer surface of the jacket (72) has an marking (i.e. indicia, 74) for the purpose of easily locating the presence of the first cable pairs (26) wherein the cable may be stripped of the outer jacket (72) for the purpose of handling the first cable pairs (26, Col 6, lines 43-50).

With respect to claim 7, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the cable of modified Kenny to comprise indicia on the outer surface of the jacket as taught by Biegon because Biegon teaches that such an arrangement is for the purpose of easily locating

the presence of the first cable pairs (26) wherein the cable may be stripped of the outer jacket (72) for the purpose of handling the first cable pairs (26, Col 6, lines 43-50).

8. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donner et al (Pat Num 6,452,094, herein referred to as Donner) in view of Kenny (Pat Num 5,298,680). Donner discloses a UTP cable (Figs 2a-2b). Specifically, with respect to claim 10, Donner discloses a bundle of twisted pairs (Col 3, lines 55-60) comprising a first twisted pair (21), a second twisted pair (23), and a third twisted pair (25), wherein the first, second, and third twisted pairs (21, 23, 25) have a common lay direction ((Right hand twist direction, Col 4, lines 23-24), wherein a fourth twisted pair (22) is laid in parallel with the bundle and has a different lay length from the first, second, and third twisted pairs (21, 23, 25, Col 4, lines 4-5) and a different lay direction (Left hand twist direction) opposite the common lay direction (Right hand twist direction, Col 4, lines 23-24). With respect to claim 11, Donner discloses that an outer jacket (18) encompasses the first, second, third, and fourth twisted pairs (21, 23, 25, and 22 respectively). With respect to claim 12, Donner discloses that the bundle of twisted pairs (21, 23, and 25) may be twisted with a common lay direction (Col 3, lines 55-60).

Donner doesn't necessarily disclose the first, second, and third twisted pairs to have a common lay length (claim 10), nor the cable having a tear drop shape cross section (claim 13).

Kenny teaches cable (Figs 3-4) utilizing twisted pair technology for the transmission of balanced or unbalanced signals (Col 1, lines 5-8) that may greatly reduce any one pair susceptibility to interfere thereby limiting noise coupling and

Art Unit: 2831

subsequent data transmission over twisted pairs is improved (Col 1, lines 53-56).

Specifically, with respect to claim 1, Kenny discloses a cable (30) comprising a plurality of first twisted pairs (16, 18, 20) of conductors (12) that may have a first lay direction (counter clockwise, Col 2, lines 35-37, states that pair 16 is twisted counter clock wise and pair 18 can have the same twist direction) and a first lay length (Fig 3), wherein the first plurality of twisted pairs (16, 18, and 20) are twisted together to form bundles (32 & 34), which then may be twisted together to form a multi-group (Col 1, lines 45-47).

With respect to claim 10, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the cable of Donner to comprise the twisted pair conductor configuration having the same twist length as taught by Kenny because Kenny teaches that such a configuration, utilizing twisted pair technology for the transmission of balanced or unbalanced signals (Col 1, lines 5-8) may greatly reduce any one pair susceptibility to interfere thereby limiting noise coupling and subsequent data transmission over twisted pairs is improved (Col 1, lines 53-56).

With respect to claim 13, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the cable cross section to comprise a tear shape, since it has been held that a change in form cannot sustain patentability where involved is only extended application of obvious attributes from a prior art. *In re Span-Deck Inc. vs. Fab-Con Inc.* (CA 8, 1982) 215 USPQ 835.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Newmoyer (Pat Num 5,493,071), Frieson et al (Pat Num 6,194,663), Mayfield (Pat Num 5,932,847), Beggs et al (Pat Num 4,697,051), Newmoyer (Pat Num 5,814,406), Brorein et al (Pat Num 4,467,138), Johnston et al (Pat Num 4,533,790), Pendergrass et al (Pat Num 5,180,890), Chou (Pat Num 6,825,410), Horie et al (Pat Num 5,659,152), Chou et al (Pat Num 6,348,651), Brorein et al (Pat Num 5,767,441), Morimoto (Pat Num 6,355,876), Hopkinson et al (Pat Num 6,818,832), Vexler et al (Pat Num 6,787,694), Starnes et al (Pat Num 6,687,437), Kenny et al (Pat Num 6,153,826), Kenny et al (Pat Num 5,744,757), Kenny et al (Pat Num 5,514,837), Pherson et al (Pat Num 3,546,357), Wessels et al (Pat Num 5,814,768), Baker et al (Pat Num 5,834,697), Mottine et al (Pat Num 6,147,309), Cronkite et al (Pat Num 4,381,426), McClean et al (Pat Num 3,297,814), and Trine et al (Pat Num 4,486,619), all of which disclose cables having conductor pairs.

Communication

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone

Art Unit: 2831

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William H. Mayo III
Primary Examiner
Art Unit 2831

WHM III
December 09, 2004